Applicant : Tom Cheng et al.   Attorney's Docket No.: 13914-033001 / 2003P00877 US
Serial No. : 10/720,447
Filed   : November 25, 2003
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Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A computer-readable medium ~~or propagated signal~~ having embodied thereon a computer program configured to determine whether a user is permitted to access a business object when executing a software application of an enterprise information technology system, the medium ~~or signal~~ comprising one or more code segments configured to:

use a permission object to determine whether a user associated with an entry in user information is permitted to access a data object associated with a data object type, wherein:

the entry in the user information associates the user with a user affiliation,

the permission object identifies:

a user affiliation to which the permission object applies,

a data object type to which the permission object applies such that the data object type is associated with multiple attributes and each data object having the data object type is associated with the multiple attributes,

a permission attribute identifying one of the multiple attributes, and

a permission value for the permission attribute, and

the user is permitted to access the data object when (1) the user affiliation that is associated with the user is the same user affiliation as the user affiliation to which the permission object applies, (2) the data object type of the data object is the same data object type as the data object type to which the permission object applies, and (3) a value of an attribute of the multiple attributes associated with the data object is consistent with the permission value of the permission attribute and the attribute corresponds to the permission attribute.

2. (Currently Amended) The medium ~~or signal~~ of claim 1 wherein the one or more code segments are further configured to permit the user to access the data object when the value of the

attribute of one of the multiple attributes associated with the data object is the same as the permission value of the permission attribute.

3. (Currently Amended) The medium ~~or signal~~ of claim 1 wherein the one or more code segments are further configured to permit the user to access the data object when the value of the attribute of one of the multiple attributes associated with the data object is the within a range specified by the permission value of the permission attribute

4. (Currently Amended) The medium ~~or signal~~ of claim 1 wherein the one or more code segments are further configured to permit the user to access the data object when the value of the attribute of one of the multiple attributes associated with the data object is one of enumerated values specified by the permission value of the permission attribute.

5. (Currently Amended) The medium ~~or signal~~ of claim 1 wherein:

the permission object identifies an attribute group having one or more attributes of the multiple attributes associated with the data object type, and

the one or more code segments are further configured to permit the user to access an attribute of the data object only when the attribute of the data object corresponds to an attribute of the attribute group of the permission object.

6. (Currently Amended) The medium ~~or signal~~ of claim 5 wherein:

the permission object identifies a second attribute group having one or more attributes of the multiple attributes associated with the data object type, a second permission attribute identifying one of the multiple attributes, and a second permission value for the second permission attribute, associates the second permission attribute and the second permission value with the second attribute group, and associates the permission attribute and permission value with the attribute group, and

the one or more code segments are further configured to permit the user to access an attribute of the data object only when the attribute of the data object corresponds to an attribute of the second attribute group of the permission object and a value of an attribute of one of the

multiple attributes associated with the data object is consistent with the second permission value of the second permission attribute.

7. (Currently Amended) The medium ~~or signal~~ of claim 1 wherein:

the permission object identifies a permitted action, and

the one or more code segments are further configured to permit the user to access the data object and perform an action on the data object when the action is consistent with the permitted action identified in the permission object.

8. (Original) A method for determining whether a user is permitted to access a business object when executing a software application of an enterprise information technology system, the method comprising:

using a permission object to determine whether a user associated with an entry in user information is permitted to access a data object associated with a data object type, wherein:

the entry in the user information associates the user with a user affiliation,

the permission object identifies:

a user affiliation to which the permission object applies,

a data object type to which the permission object applies such that the data object type is associated with multiple attributes and each data object having the data object type is associated with the multiple attributes,

a permission attribute identifying one of the multiple attributes, and

a permission value for the permission attribute, and

the user is permitted to access the data object when (1) the user affiliation that is associated with the user is the same user affiliation as the user affiliation to which the permission object applies, (2) the data object type of the data object is the same data object type as the data object type to which the permission object applies, and (3) a value of an attribute of the multiple attributes associated with the data object is consistent with the permission value of the permission attribute and the attribute corresponds to the permission attribute.

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9. (Original) The method of claim 8 further comprising permitting the user to access the data object when the value of the attribute of one of the multiple attributes associated with the data object is the same as the permission value of the permission attribute.

10. (Original) The method of claim 8 further comprising permitting the user to access the data object when the value of the attribute of one of the multiple attributes associated with the data object is the within a range specified by the permission value of the permission attribute.

11. (Original) The method of claim 8 further comprising permitting the user to access the data object when the value of the attribute of one of the multiple attributes associated with the data object is one of enumerated values specified by the permission value of the permission attribute.

12. (Original) The method of claim 8 wherein the permission object identifies an attribute group having one or more attributes of the multiple attributes associated with the data object type, the method further comprising permitting the user to access an attribute of the data object only when the attribute of the data object corresponds to an attribute of the attribute group of the permission object.

13. (Original) A computer system for determining whether a user is permitted to access a data object when executing a software application of an enterprise information technology system, the system comprising:

a data repository for access control information for software having data objects, each data object (1) being associated with a data object type having multiple attributes, (2) having multiple attributes that are the same as the multiple attributes of the data object type to which the data object is associated, and (3) having a value associated with each attribute of the multiple attributes, the data repository including:

user information that associates a user affiliation with a user of the software application, and

permission information having multiple permission objects, each permission object identifying a user affiliation to which the permission object applies, a data object type to which the permission object applies, a permission attribute identifying one of the multiple attributes, and a permission value for the permission attribute; and

an executable software module that causes:

a comparison of a value of an attribute of the multiple attributes associated with a data object to which a user seeks to access such that the attribute corresponds to the permission attribute of a permission object with the permission value of the permission object, and

an indication that a user is permitted to access a data object when the value of the attribute associated with the data object is consistent with the permission value of the permission object.

14. (Original) The system of claim 13 wherein the executable software module causes an indication that a user is permitted to access the data object when the value of the attribute of one of the multiple attributes associated with the data object is the same as the permission value of the permission attribute.

15. (Original) The system of claim 13 wherein the executable software module causes an indication that a user is permitted to access the data object when the value of the attribute of one of the multiple attributes associated with the data object is the within a range specified by the permission value of the permission attribute.

16. (Original) The system of claim 13 wherein the executable software module causes an indication that a user is permitted to access the data object when the value of the attribute of one of the multiple attributes associated with the data object is one of enumerated values specified by the permission value of the permission attribute.

17. (Original) The system of claim 13 wherein:

the permission object identifies an attribute group having one or more attributes of the multiple attributes associated with the data object type, and

the executable software module causes an indication that a user is permitted to access an attribute of the data object only when the attribute of the data object corresponds to an attribute of the attribute group of the permission object.

18. (Original) The system of claim 17 wherein:

the permission object identifies a second attribute group having one or more attributes of the multiple attributes associated with the data object type, a second permission attribute identifying one of the multiple attributes, and a second permission value for the second permission attribute, associates the second permission attribute and the second permission value with the second attribute group, and associates the permission attribute and permission value with the attribute group, and

the executable software module causes an indication that a user is permitted to access an attribute of the data object only when the attribute of the data object corresponds to an attribute of the second attribute group of the permission object and a value of an attribute of one of the multiple attributes associated with the data object is consistent with the second permission value of the second permission attribute.

19. (Original) The system of claim 13 wherein:

the permission object identifies a permitted action, and

the executable software module causes an indication that a user is permitted to access the data object and perform an action on the data object when the action is consistent with the permitted action identified in the permission object.

20. (New) The medium of claim 1 wherein:

the permission object identifies a permitted action, and

the one or more code segments are further configured to permit the user to access the data object and perform one or more database operations on the data object when the action is

consistent with the permitted action identified in the permission object, where the database operations comprise create, read, update and delete.